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A NEW METHOD OF COCA PREPARATION IN THE COLOMBIAN AMAZON

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COCA, the well-known narcotic elaborated from the leaves of *Erythroxylon Coca* Lam., is used over a wide area in the Andean highlands of southern Colombia, Ecuador, Peru and Bolivia, in parts of the western Amazonia and in certain isolated regions such as the Sierra Nevada de Santa Marta in northernmost Colombia. The manner of using coca differs appreciably in each of these areas, and, even within a given area, coca-chewing often varies somewhat from locality to locality.

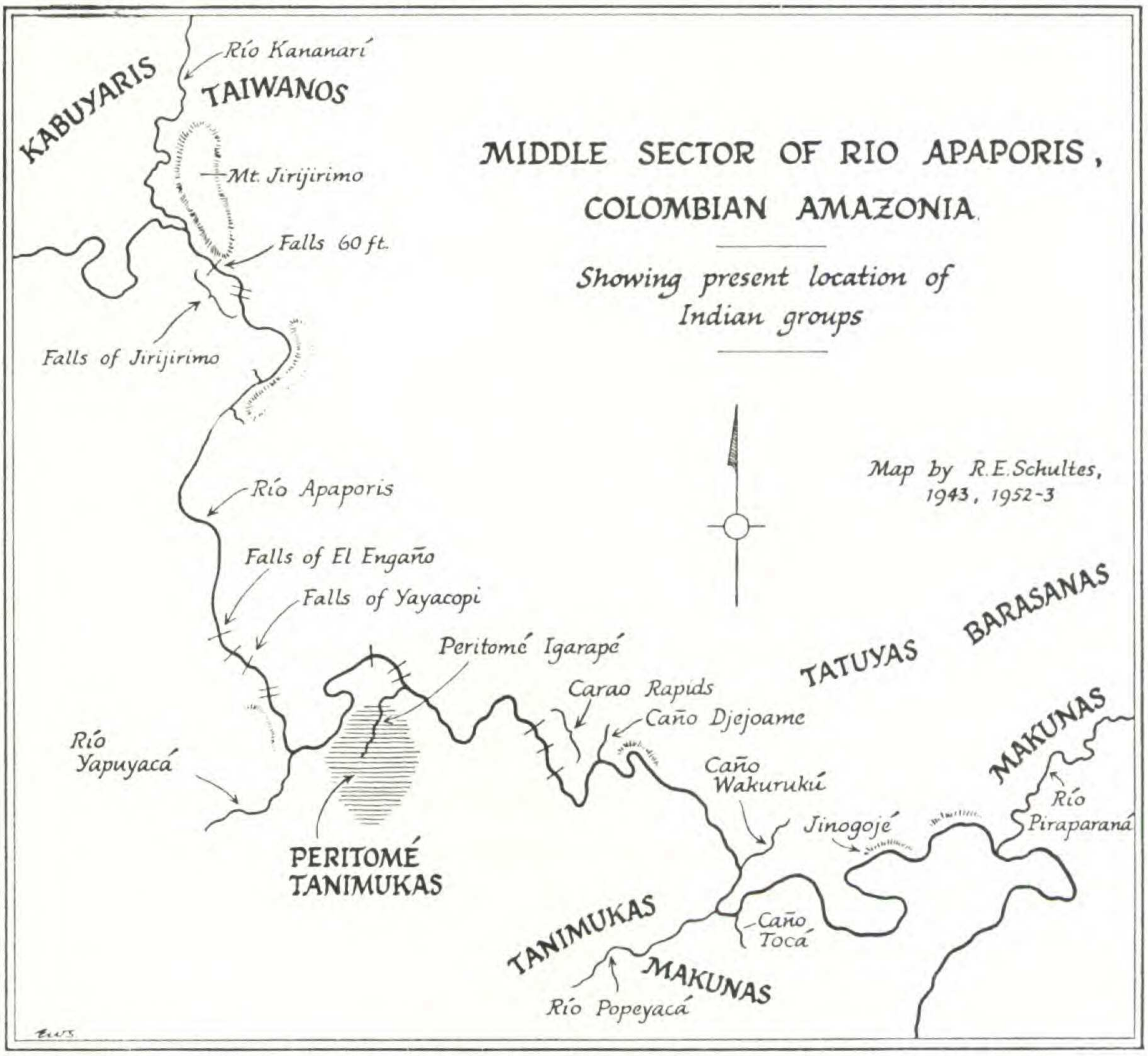
Curiously, the preparation and use of coca in the Amazonian parts of Colombia vary very little, if at all, from tribe to tribe. Quite in contrast to the method of use common throughout the Andean highlands, where dried, whole leaves of the plant are chewed with alkali quids of diverse origins, the method throughout the forested northwest Amazon requires the toasting and pulverization of the leaves. Into the resulting fine, green powder is thoroughly mixed as an alkaline component the finely sifted ashes of the leaves of any of several species of *Cecropia* or of *Pourouma*, usually *P. cecropiaefolia* Mart. The final powder is pale greenish, often with a slight greyish hue, and, when fresh, has a flavor which is not at all unpleasant.

The Indians of the Colombian Amazon take this dry powder into the mouth and, with the tongue, slowly work the gradually moistening mass until it is packed between the cheek and the gums. The slow "dissolving" and swallowing of the coca-ash mixture induces the desired narcotic effects and, in many ways, is much pleasanter and more satisfactory than the highland method of chewing harsh, dried leaves with lime pebbles or other alkaline agents.

For many years, I had studied the preparation and use of coca in eastern Colombia and had experimented with it myself over long periods. The similarity of its preparation over such a wide area was rather monotonous. In March 1952, however, I encountered the only major difference in coca-making which ever came to my attention during my more than a decade of travel through the region. It was as unexpected as it was novel. Even Koch-Grünberg, whose ethnological work in the region is classic, fails to report this method of coca preparation (Koch-Grünberg, Theodor: "Zwei Jahre unter den Indianern" 1 (1909); 2 (1910). Neither does the most recent and most thorough study of coca in Colombia (Uscategui Mendoza, Nestor: "Contribución al estudio de la masticación de las hojas de coca" in Rev. Col. Anthrop. 3 (1954) 209–289) consider it. Since it seems not to have been reported, it will be described in detail as a contribution to our growing understanding of the narcotics of South America.

In the very headwaters of the Igarapé Peritomé, a small creek on the right bank of the Río Apaporis into which it empties slightly downstream from the great falls known as the Cachivera de Yayacopi or Raudal de La Playa, there is a small group of Tanimuka Indians living entirely detached from the main body of the tribe on the Río Popeyacá to the east (See map). This group,

numbering now only twenty-five or thirty, apparently fled to hiding in this remote spot more than a quarter of a century ago rather than submit to enforced labor in the balata-forests.



It would seem that these isolated Tanimukas hold a monopoly on this unusual method of coca-making. Whether it is a recent innovation of their own or whether it represents a once more widespread culture-trait surviving only in this small band we cannot declare. All that I can state with certainty is that the custom is not practiced amongst any of the other coca-using tribes of Amazonian Colombia, not even in the main group of Tanimukas. It is worthy of note, nevertheless, that the

Tanimukas of the Popeyacá, as well as Yukunas, Makunas and other neighboring peoples, occasionally journey to the Peritomé Tanimukas, especially immediately prior to important dances or festivals, to purchase large supplies of the Peritomé coca. And this has continued apparently for many years, notwithstanding the fact that the necessary plant ingredients are to be found abundantly throughout the whole area.

The refinement, if it may be so termed, to which I refer lies in the use of the resin of *Protium heptaphyllum* March. in the coca-ash mixture.

Long and slender tubes or "cigarettes" of rolled and partly dried leaves of *Ischnosiphon* are tamped half full with small lumps of the whitish resin. The tip of that part of the "cigarette" containing the resin is lighted and brought to a glow by a gentle blowing through the tube.

In the meantime, several armfuls of dried leaves of *Cecropia* are set afire on the earth floor of the house and reduced to ashes. The ashes are then scraped together into a small, more or less conical pile. Before the ashes are completely cooled, several Indians with resin-tubes insert the glowing ends of the tubes into sundry places in the ash-pile and blow vigorously. The balsamic incense or smoke from the glowing resin permeates the ashes. This process, which fills the house with a pleasant myrrh-like aroma, continues for seven or eight minutes or until most of the resin in the tubes is spent.

The ashes are then collected, sifted through a piece of fine, pounded bark-cloth and added to an equal amount of pulverized and sifted coca powder. The product is then ready for use.

The presence of the incense from *Protium*-resin alters appreciably the usual characteristic taste of coca, giving it a balsamic savor. There is no evidence, however, that

this addition either heightens or lessens the normal narcotic effects of coca prepared in the manner customary throughout the northwest Amazon. It would seem to be obvious that the only effect sought is a change in taste.

Thoroughly accustomed though I was to the use of coca at this time, I found that the resin-treated product usually caused irritation of the mouth and throat the first day of its use. This irritation, due undoubtedly wholly to the balsamic smoke absorbed by the ash-particles, disappeared upon continued use of the coca.

Enquiry indicated that the resin of *Protium heptaphyllum* is the only one of the many balsamic exudations of the forests considered to be suitable for flavoring coca. According to Indian custom, resin for this purpose is gathered exclusively from old trees of *Protium heptaphyllum*, but no "explanation" for avoidance of younger trees was offered. Incisions are made in the bark of the trees, and the resin is allowed to dry on the trunk before being gathered and wrapped up in leaves into little packets which are hung under the rafters of the house to "age" for four or five months before using.

The genus *Protium*, belonging to the Myrrh Family or Burseraceae, has given several resins to commerce and medicine, and the resins of allied genera have likewise enjoyed economic importance. Several species of *Protium* from northern South America have been of value as medicinal plants, but they are no longer so employed in the United States.

The resin from *Protium heptaphyllum*, a species widespread in South America, is usually referred to in Colombia as *brea* or *pergamín*, but it is known commercially as *tacamahaca* gum. These vernacular names, however, may also be applied to the resins of other burseraceous plants. This species yields a hard, translucent, white resin which easily fractures and which is distinctly pungent

even when old and dried. The properties of *tacamahaca* are similar to those of other terebinthinates. Its most important use at the present time is as an incense in churches. Some is exported to the United States from Brazil for use in the lacquer industry (Tschirch, A. and E. Stock: Die Harze 2, pt. 1 (1935) 339). While the fragrance of *brea* is exceedingly strong, the report that "where this tree grows, the air in the vicinity seems pleasant and wholesome from the incense-like resin that drops from any wound in the bark and collects in masses on the ground" (Record, S. J. and R. W. Hess: Timbers of the New World (1943) 109) would seem, at least insofar as my own field experience has taught me, to be rather an exaggeration.

Chemically, the resin of *Protium heptaphyllum* is made up of 30 per cent protamyrine, 25 per cent proteleminic acid, 37.5 per cent proteleresin as well as several minor constituents such as oil (Wehmer, C.: Die Pflanzenstoffe, ed. 2, 2 (1931) 651).

Caraña, known also as *gum caranna* or *Brazilian elemi*, is the product of a closely allied species, *Protium Carana* March. It has a balsamic odor only when fresh, and it is bitter to the taste. The dried resin is usually grey or blackish grey and translucent, and it fractures with a very lustrous break. It apparently is not employed in the preparation of coca. Its other uses are, in general, similar to those of the resin from *Protium heptaphyllum* and oftentimes the two are not distinguished by native peoples.